CCTV Tester

User's Manual

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1, Safety Information

1.1 Precaution before using the tester

A. Make sure to read the user's manual before using the product.

B. Make sure to check the input and output range of voltage or current at every input and output ports before connecting to prevent system overloading.

C. The following operational environment should be maintained constantly:

- Temperature: -22°F–+158°F (-30°C–+70°C)
- Relative humidity: 30% ~ 90%
- Recharging voltage: DC5V

1.2 Precautions when using the tester

A. Do not use the tester in damp humidity or leaking gas environments.

B. Do not touch the tester with wet hands.

C. Be mindful not to shock or shake the tester while in use to avoid damage.

D. Avoid the places of strong magnetism or electric wave, which could cause incorrect measuring.

E. Be careful not to expose the ports or joints to dirt or liquid.

F. Do not disassemble the tester.

1.3 Precautions for battery charging and usage

A. Use only original chargeable battery; when charging the batteries, please use the original power adapter.

B. Make sure not to disorient the polarization of batteries.

C. Do not short circuit or disassemble batteries.

2, Introduction

2.1 Features and function

A. **Video test**

The video signal and the quality of picture can be tested.

B. **PTZ controlling**

It has the basic operational test of PTZ products, function include pan/tilt, zoom in/out, preset setting and operation, speed adjustment etc; support multiprotocol and baud rate, communication via RS232, RS422 simplex and RS485 port. RS485 protocol include: Pelco D,P, Samsung, Panasonic, Molynx. Additional Protocols may be added as per customer requests.

Baud rate include: 2400, 4800, 9600, 19200.

C. Power to camera

The tester can output DC12V power to camera which is helpful if power supply is not available when testing a camera.

D. Digital multimeter

The tester can detect the AC/DC voltage and resistance; high testing range and precision can help installer find out the circuit problem.

E. Video signal attenuation analyzing

The tester can help installer to analyze the video signal attenuation by catching the video signal parameters.

F. UTP cable test

The wiring condition (disconnected, short of UTP cable) can be tested and clearly shown on the screen.

G. Video signal generating

It can output Green, white Black and Blue screen to allow technician to inspect video monitor or DVR. The generating signal support PAL or NTSC (don't support both meanwhile) format.

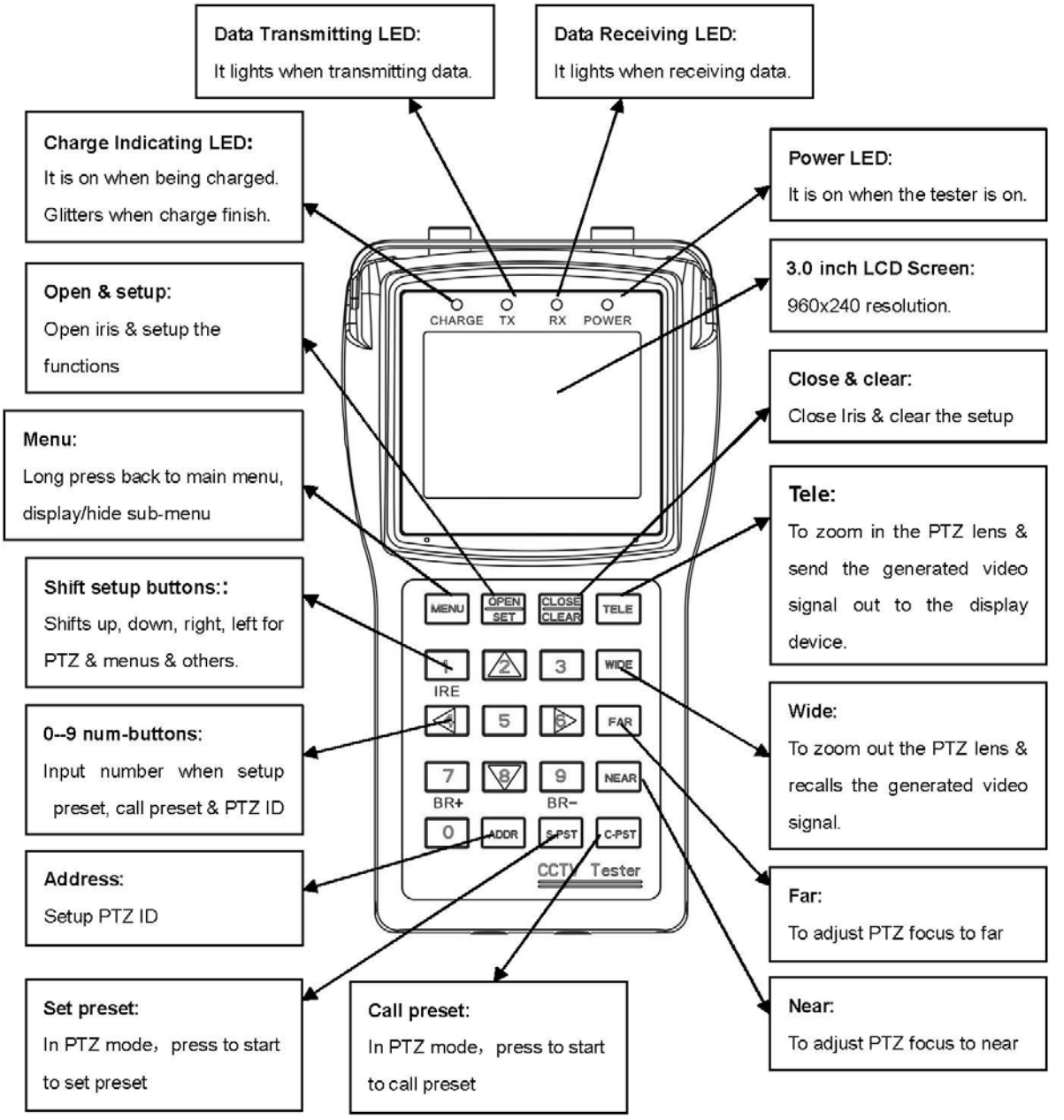
H. RS485 data test

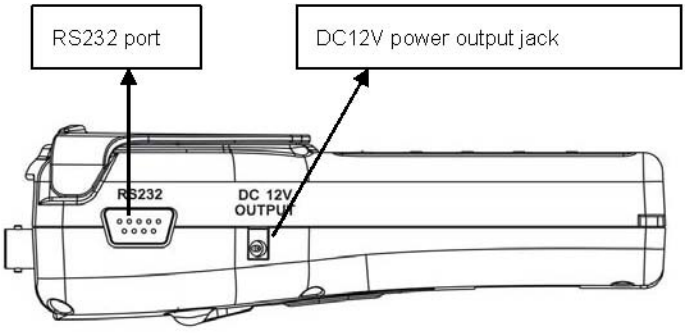
It can test the RS485 data sent from controlling device and display the hexadecimal data content for engineer to analyze.

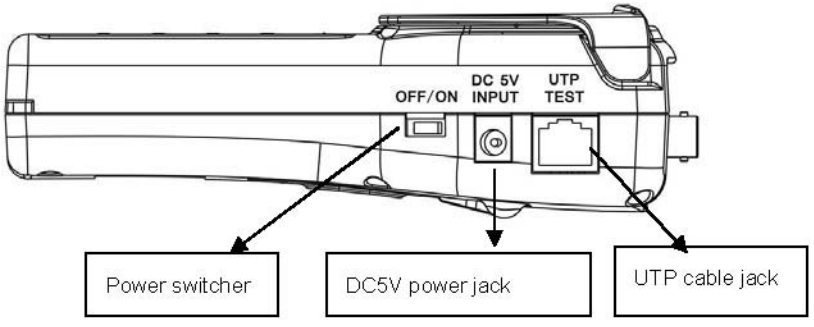
2.2 Standard items

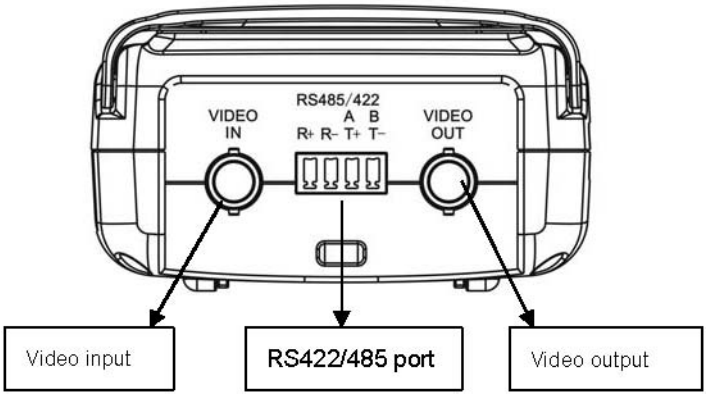
Item	Quantity
CCTV tester	1
Battery	1
Power adapter	1
UTP cable tester	1
BNC connect cable	1
Test lead set	1
Necklace	1
Multimeter cables	2 (only for some Models)
DC12V power cable	1
User manual	1

2.3 Function of each part




RS232 port
DC12V power output jack
RS232
DC 12V
OUTPUT


OFF/ON
DC 5V
INPUT
UTP
TEST
Power switcher
DC5V power jack
UTP cable jack


VIDEO
IN
RS485/422
A B
R+ R- T+ T-
VIDEO
OUT
Video input
RS422/485 port
Video output

2.4 Specification

Model		CT330(S) CCTV Tester
Video Test	Signal Mode	NTSC/PAL automatically suitable
	Display	inch LCD screen, 960 x 240 resolution 3.0
	Video Input	1 channel BNC
	Video Output	1 channel BNC
	Adjustable	Brightness adjustable
PTZ Control and Test	Communication	RS232, RS422 simplex and RS485
	Protocol	Include more than 20 kinds of protocols or customized
	Baud Rate	2400,4800,9600,19200
Multimeter Function	DC Voltage Test	Max: 1000V, Precision: 0.1mV
	AC Voltage Test	Max: 750V, Precision: 0.1mV
	Resistance Test	Max: 40MΩ, Precision: 0.1Ω
Power to Camera	Voltage	DC12V
	Working Time	45 hours to normal camera
	Max Current	400mA
Other Functions	Video analyzing	Video signal attenuation analyzing
	UTP Cable Test	Test UTP cable connection state
	Signal Generating	Output 1 channel video signal for testing monitor
	RS485 Data Test	Test the RS485 data sent from controlling device
	OSD Menu	English OSD menu
	Keyboard	New design with number buttons, easy to operation
Power and Battery	Power Adapter	DC5V
	Battery	3000mAh rechargeable battery inside
	Rechargeable	6 hours recharging time
	Low Consumption	Sleeping mode, display battery power state
	Working Time	10 hours
Others	Work Temperature	-22°F–+158°F (-30°C–+70°C)
	Work Humidity	30%90%
	Dimension	6.54" x 3.58" x 1.89" (166mm x 91mm x 48mm)
	Weight	.75lb (340g)

3，Operation Introduction

3.1 Power and battery

A. The power slide switch is located at the side of the tester. Turn the power slide switch on to power on the tester; turn it off to power off the tester;

B. After the tester turning to sleeping mode, turn the slide switch on again to restart it;

C. This tester has panel battery inside the device, more capacity, longer working time;

D. Without the authorization from the manufacturer, please don't release the rear panel and try to repair the battery;

E. The batteries should be plugged in over 5 hours for full charge, while charged the **Charge Indicating LED** will be on; after full charging, the **Charge Indicating LED** light will turn off and the charging stop automatically.

F. The charged batteries can operate for 10 hours or more.

G. When the battery indicator in system information menu shows 25 (the status number includes 100, 90, 75, 50, 25, 5), please recharge it for use.

H. The tester can be used when it is being charged.

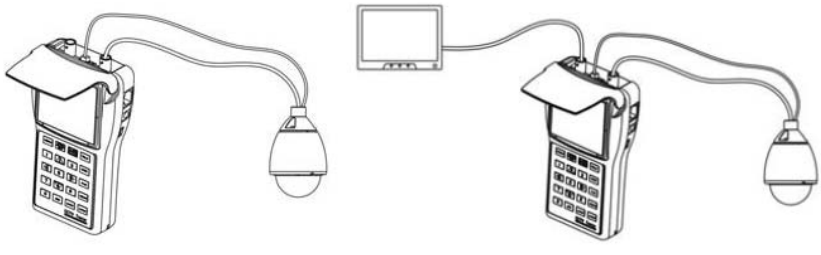
3.2 Main menu introduction

Turn on the device; you will see the main menu, as the following shows:

- 1-5 are five independent submenu;
- Press the corresponding number button to get into the submenu;
- Version number and S/N can't be edited;

1 SYSTEM SETUP	——> System information
2 PTZ CONTROLLING	——> PTZ controlling function
3 UTP TESTING	——> UTP testing function
4 VIDEO GENERATING	——> Video generating function
5 RS485 DATA ANALYZING	——> RS485 protocol analyzing
6 MULTI METER	
VER:V1.09 S/N:08110910	——> Software version and S/N

3.3 Video test



A. Connect the output terminal of video output system to the video input BNC of tester, turn on the tester, the video can be displayed on the screen.

B. Connect the video output BNC of tester to the video input of other display device. It can display the video signal generated by the tester or looped by tester.

3.4 System information submenu

A. Press **"1"** to switch to the system information submenu, as follows:

PROTOCOL	Pelco P	——> PTZ protocol
COM	485	——> Communication port in used
RATE	4800	——> Baudrate: 2400/4800/9600/19200
SPEED	016	——> Pan and tilt speed
IDLE TIME	000	——> Idle time from last operation to auto turn off (minute)
BATTERY	090	——> Battery power status: 100/90/75/50/25/5

B. Press **Set** button to start the set up

C. Press num-button"**2"** and"**8"** (PTZ direction button **"UP"** and **"DOWN"**) to select the option (Battery power status can be edited)

D. Press num-button **"2/6/8"** (PTZ direction button **"UP/DOWN/RIGHT"**) to adjust the parameter

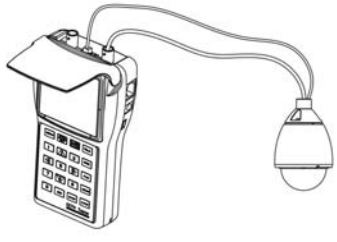
E. Press num-button **"4"** (PTZ direction button **"LEFT**)to save and quit

F. Press num-button **"4"** again to finish the setup situation, the characters in the menu will stop glitter

G. Press **MENU** button for 1 second to back to the main menu. **Note:** In our device, PTZ there are 16 (some protocol ok has 7) levels for the PTZ, 0 means the minimum speed, 17 (or 7) means the maximum speed

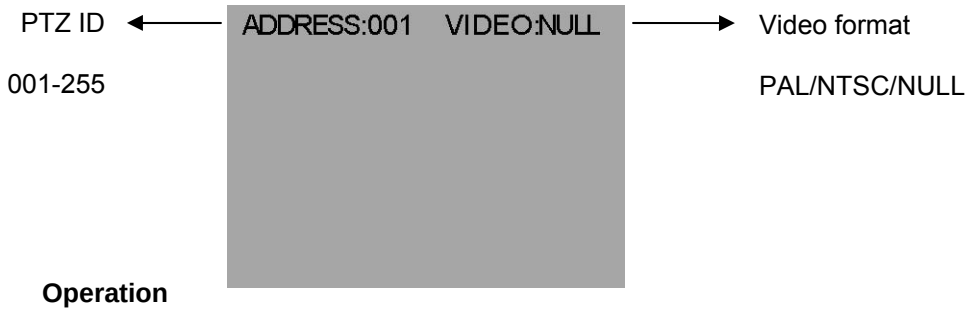
3.5 PTZ test

A. Connection



Connect the tester with the PTZ camera as the picture shows.
In the main menu, press num-button "**2"** to switch to the PTZ testing function

submenu, as the following



B. Operation

- Press the **ADR** button, input the PTZ address by using num-button;
- Press the **SET** button to save the setup;
- Press the **MENU** button to hide the menu information and show a clean screen for camera image;
- Press **MENU** button for 1 second to back to the main menu.

C. PTZ controlling

When connect to the PTZ correctly, the camera image will be displayed on the screen of the tester; after setup the proper protocol, baud rate and the ID of the PTZ, user can control the PTZ as follows:

- Press **UP/DOWN/LEFT/RIGHT** to control the movement of the PTZ;
- Press **OPEN/CLOSE** to control the iris;
- Press **FAR/NEAR** to adjust the focus manually;
- Press **WIDE/TELE** to zoom in/out the camera lens.

D. Preset position

- Set up the preset position
  In the PTZ controlling mode, press **SPST** button, then input the preset position number by the num-buttons, press **SET** to save the setup operation, user can use this method to set several preset positions one by one;
- Calling the preset position
  In the PTZ controlling mode, press the CPST button, then input the preset position number by the num-buttons, press **SET** to save the setup operation, user can use this method to call several preset positions one by one;

3.6 Video signal attenuation analyzing

At the mode of video and PTZ testing, when there is an analogue video signal connected in and displayed on the screen correctly, press the num-button **"1"** to catch the parameter of video signal as:

- MAX Vpp: means the difference between maximum and minimum of video signal strength, the video signal will be brighter when this parameter is larger.
- AVERAGE Vpp: means average of the difference between maximum and minimum of video signal strength.

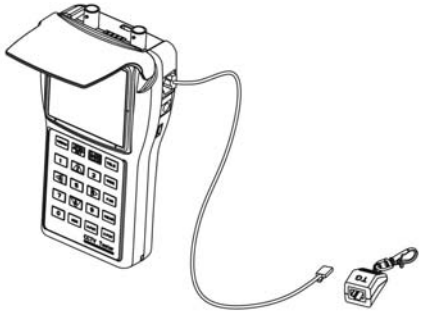
- SYNC SIGNAL means the voltage of the synchronic signal; user can use this signal to evaluate the impedance of coaxial cable. For example, if the synchronic signal number of camera is 0.3V (tested by tester in the camera side), after a long distance transmission via coaxial cable, the synchronic signal number falls to 0.21V (tested again by tester), this means the attenuation of video signal via this coaxial cable is 30%. User can evaluate if the quality of coaxial cable is good enough for this distance's usage.
- If there is no signal is detected, **"No Video"** will be displayed.

3.7 Screen brightness adjustment

At the mode of video and PTZ testing, user can press the num-button **"7"**（**BR+**）**and "9"**（**BR-**）to adjust the brightness of screen.

3.8 UTP cable test

A. Connect the tester to the UTP cable tester as the picture shows:



B. In the main menu mode, press num-button **"3"** to switch to the UTP testing mode;

C. Press **Set** to start the test; UTP cable information will be displayed in the screen.

D. User can estimate the UTP cable connection situation from the information.

CCTV Tester side sequence <——

```
UTP CABLE TEST
1 --- ----3
2 --- ----6
3 --- ----1
4 --- ----0
5 --- ----0
6 --- ----2
7 --- ----7
8 --- ----8
```

——> UTP tester side sequence

——>" 0"meansopen circuit

——> If there are 2 line show "0", it maybe:

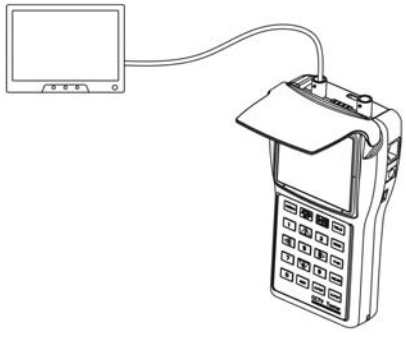
- They open circuit separately;
- They short circuit to each other;

E. User can estimate the connect situation based on the information;

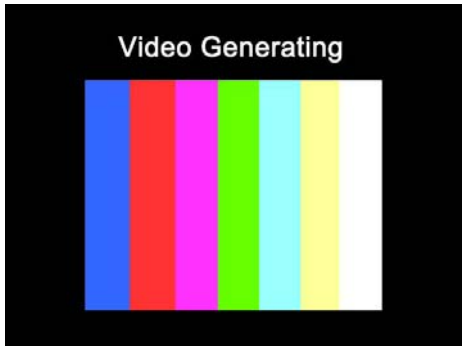
F. Press Menu button for 1 second to back to the main menu.

3.9 Video generating

A. Connect the tester to the displayer device as the picture shows:



B. In the main menu, press the num-button**"4"** to switch to the video generating function submenu, as the follows:

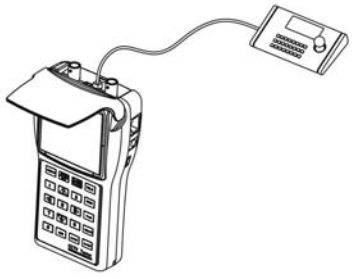


C. Operation setup

- Press num-button **"4"** to switch to the video generating function mode.
- Press **SET** to switch the video generating signal: Color bar, Blue, Red, Pink, Green, Cyan, Yellow and White.
- Press **TELE** to send the generated video signal to the display device.
- Press **WIDE** to recall the generated video signal.
- Press **MENU** button in short time to hid/display the video generating menu character.
- Press **MENU** button for 1 second to back to the main menu.

3.10 RS485 data test

A. Connect the tester to the controlling device as the picture shows:



B. In the main menu, press num-button "5" to switch to the RS485 protocol analyzing mode, as follows:

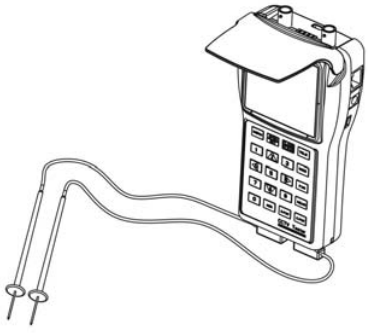
C. Press **SET** to start the setup of baud rate.

D. Press **UP/DOWN** to select the tester's baud rate, make it same with the controlling device's. baud rate.

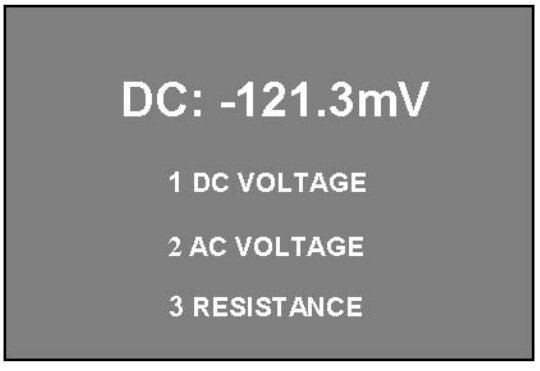
E. Make the controlling device transfer the RS485 data to the tester, the hexadecimal signal data will displayed on the screen as follows, engineer can analyze the data to know if the controlling device works with the correct protocol.

3.11 Digital multimeter

A. Connect the 2 detecting cables on the tester as the picture shows：



B. Press the num-button **"6"** to open the multimeter submenu as follows:



C. Press the num-button 1,2,3 can select the corresponding option:

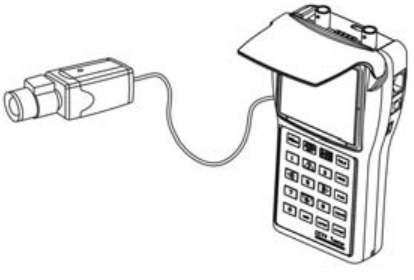
- DC voltage test range：01000V，precision：0.1mV；
- AC voltage test range：750V，precision：0.1mV；
- Resistance test range：040MΩ，precision：0.1Ω。

D. Press **MENU** button for 1 second to return to the main menu.

Note: Please don't test the voltage over the testing range; it can break the tester.

3.12 Output power to camera

Connect the camera with the tester as the picture shows; connect the DC12V output from tester to the DC12V input port from the camera using the accessory "**DC12V power cable**":



The working times of cameras vary due to camera consumption; it can work for more than 4 hours if with a camera which consumption current is less than 100mA; the maximum output current from tester is400mA. Please use the proper camera.

Note: 1. The output voltage of tester is DC12V; please make sure it works with the proper camera.
2. Please don't connect the output to the input of tester itself, it can break the tester.

4, Warranty

4.1 Warranty items

Since the delivery day:

1) Exchanging service within 15 days from the receiving day, we responsible for the freight charge (battery exchanging service within 90 days from the receiving day).
2) Repairing service within 1 year, change accessories and repair for free, customers should responsible for the freight charge (repairing service don't include battery).
3) We provide whole life repairing service for our products with proper charge; customers should be responsible for the freight charge.

4.2 Warranty exception

We provide repairing service with proper charge, customers responsible for the freight charge

1) Damage caused by abuse, unreasonable use, mistreatment, or neglect.
2) Damage caused by modification or repair not authorized by our company, working in hostile environments, or natural disaster.
3) Damage caused by improper or improperly used packaging, or other devices work in the same system.

4.3 Complemented items

1) Company is not responsible for other assurance and other derivative from capital loss: The product and the user guides are not assured for particular users and some special purpose of use.
2) If the products returning for exchanging was damaged, modified or miss accessory, we will charge the proper payment.
3) If the components are no longer produced during the warranty limited period, company will make a decision to replace similar products at no charge.
4) Don't offer exchanging service for special design products by customers.